Comments on the proposed IBOC DAB system:

With the information that is currently available to me I must say that I think the American Public will be much better served by preserving and improving on our current analog system of broadcasting, rather than switching to a disastrous hybrid system of analog and digital broadcasting. I am neither an analog enthusiast nor am I opposed to digital. I am in favor of good quality audio and I am opposed to lousy sound quality.

The IBOC system is being sold as the system that is going to bring radio to a new generation of listeners. Ibiquity Digital is promising CD quality sound and other neat features such as song title and artist. There was also mention that IBOC would be able to send coupons to radios when certain sponsor's commercials play on the air. These sound like some interesting new features, but the sad truth is that the above features are already possible with RDS. It also promises FM like stereo audio on AM. Once again this is already possible with a good wideband receiver equipped with C-Quam capabilities.

The IBOC system appears to have signal coverage area issues. Broadcasters crank up the audio processing in order to get that extra quarter-mile out of their licensed signal. They are not going to be happy when they discover that the digital signals do not go as far as the analog signals do. This problem is especially evident on the AM band. The problems with skywave propagation at night make IBOC on AM virtually unworkable.

There are also apparent bandwidth issues that need to be worked out with the IBOC system. Listeners complained about serious noise while adjacent channel stations tested IBOC on FM. The problems are even worse on AM. The current NRSC standard that AM stations must conform to is an audio bandwidth cutoff at precisely 10.2 kHz. The IBOC system would require AM stations to operate with a bandwidth of approximately 15 kHz.

Although the AM stations would be sending out a signal that occupies 15 kHz bandwidth, the analog audio signal would have to be cut off at 4.5 kHz, which is less than half of the current analog standard. Even though most of the radios manufactured in this day and age have lousy AM audio response there are still many receivers in use with good AM audio response.

The switch to IBOC concerns me because there are a lot of small independent broadcasters who will not be able to afford the conversion to IBOC. They will be forced off the air and their signals will be taken over by the huge media conglomerates that are already too big. This will be a major blow to minority broadcasters and small school and community radio stations.

Instead of trying to force a new digital system of inferior quality on the American people, try making improvements on the current analog systems. A new all digital broadcasting system exists in the form of satellite radio. If a terrestrial form of digital broadcasting is desired, then by all means there must be spectrum somewhere that can be allocated. The rest of the world is using the L band for their system called Eureka.

From all the research I have done on IBOC it seems that both the analog and digital sound quality will suffer using this hybrid system. XM and Sirius both promise CD quality digital sound. That is not the case. I first heard XM in a noisy Best Buy store and even with all the other ambient noise I could still easily hear all the digital artifacts in the audio. Satellite radio is a completely digital service and there are audio quality issues. You can not convince me that IBOC audio is going to sound any better with an analog digital hybrid system than an all digital system does.

If the FCC is really concerned with providing the American people with better broadcasting audio quality then you should work on improving the current analog system. There are things that the radio manufacturers can add to their radios that will greatly improve audio quality without switching to a risky digital hybrid system.

To improve the analog system it is important for the radio manufacturers to include better antennas, RF amplifiers, and Digital Signal Processing. I am amazed by the crisp clear sound that a truly good quality AM receiver can produce. The C-Quam AM Stereo technology has greatly improved. There have also been great strides in noise blanking techniques, which are employed by DSP (digital signal processing).

If you want better quality sound, you need better quality radios at affordable prices. There are currently radio tuners available with everything I just described, but they are produced on a small scale and cost nearly $2,000.00 which is kind of steep for the average listener. Analog works well and should be preserved.

I think it is a good idea to develop a new all digital broadcasting system. This all-digital system should be on its own broadcast band. It should truly deliver CD quality sound to the listeners. It should also be easily upgradeable as new coding algorithms are developed.

IBOC is not going to be the savior of the radio industry that many are hoping for. In fact I think it will be just the opposite. If the FCC is truly concerned about saving the radio industry (and the whole media industry at that) then you need to make corrections to that nightmare called the telecommunications act of 1996.

Make the radio manufacturers make better consumer electronics. Make them include AM Stereo wherever FM Stereo is available. Encourage them to put better antennas on the radios. Have them use DSP and noise blanking. Enforce AMAX audio bandwidth standards on quality receivers. Leave digital transmission to it's own separate broadcast band.

These are my comments about IBOC. It isn't a good Idea to implement this now. Maybe it will be in ten or twenty years, but now is not the time. I think that there are more important issues for the FCC to be dealing with right now.

Sincerely,

Russell Skadl